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10/527,681

03/11/2005

Mario Scholz

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EXAMINER

LOEWE, ROBERT S

ART UNIT

PAPER NUMBER

1796

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/527,681 | <b>Applicant(s)</b><br>SCHOLZ ET AL. |  |
|                              | <b>Examiner</b><br>ROBERT LOEWE      | <b>Art Unit</b><br>1796              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 7/14/08.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4,6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,6 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Applicant's arguments/remarks, filed on 7/14/08, have been fully acknowledged.

#### ***Drawings***

The drawings are objected to under 37 CFR 1.84: The drawings (Figures 1 through 5) need to be supplied in English. Applicants have stated that complying drawings will be submitted upon an indication of allowable subject matter.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mangold et al. (US Pat. 6,328,944) in view of Azechi et al. (US Pat. 6,331,588).

Claim 1: Mangold et al. teaches doped, pyrogenically prepared oxides of metals and/or non-metals which are doped with one or more doping components. Mangold et al. further

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teaches that the pyrogenically prepared oxides of metals and/or non-metals can be used as fillers and additives in the silicone and rubber industry (3:26-36). Mangold et al. further teaches potassium salts may be used as dopant (2:57-58) and that the doping salts are introduced by means of aerosol (2:5-45). Mangold further teaches doping levels of 0.00001 to 20 wt% (1:35) and BET surface areas of the doped oxides between 5 and 600 m<sup>2</sup>/g (1:39-40). See MPEP 2131.03 (anticipation of ranges). Mangold et al. does not specifically teach DBP absorption of the fumed oxide being undetectable or being less than 85% of the normal value for that of fumed silica. However, Mangold satisfies all of the other claim limitations regarding the doped pyrogenically-prepared silica; further, the fumed silica taught by Mangold et al. is prepared in a substantially similar manner as the fumed silica prepared in the instant application. Thus, it is expected that the materials prepared according to Mangold et al. would implicitly have the same properties, in this case, DBP absorption, as the instant application.

Mangold et al. further teaches that the doped, pyrogenically prepared silicas can be used as fillers for silicone rubbers. Mangold et al. does not explicitly teach that the doped silicas can be used as fillers for liquid silicone rubbers. However, Azechi et al. teaches liquid silicone rubber (LSR) compositions having fumed silica fillers with BET surface areas of from 50 to 600 m<sup>2</sup>/g (abstract and 4:55-61). Mangold et al. and Azechi et al. are combinable because they are from the same field of endeavor, namely, compositions containing pyrogenically prepared oxide. At the time of invention, a person having ordinary skill in the art would have found it obvious to employ the doped, pyrogenically prepared oxides as taught by Mangold et al. as fillers into the liquid silicone rubber compositions as taught by Azechi et al. with and would have been motivated to do so since Mangold et al. teaches that the addition of doped, pyrogenically

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prepared silicas can be used as fillers for silicone rubbers to adjust the rheology of liquid systems and to provide heat-stabilization (3:26-36).

Claim 6: Mangold et al. teaches that the doping amount is preferably in the range of 1 to 10,000 ppm (1:35-36), which falls into the range of instant claim 6.

Claim 7: Mangold et al. does not explicitly teach that the silicone rubber compositions having the doped, pyrogenically prepared silica fillers present exhibit lower viscosities and flow limits as compared with fumed silicas of equal or similar surface area. However, Mangold et al. teaches all of the claimed ingredients, process steps and process conditions as claimed; thus, the claimed effects and physical properties would implicitly be achieved by carrying out the disclosed process. If it is Applicant's position that this would not be the case: (1) evidence would need to be presented to support applicants' position; and (2) it would be the examiner's position that the application contains inadequate disclosure in that there is no teaching as to how to obtain the claimed properties and effects by carrying out only these steps.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mangold et al. (US Pat. 6,328,944) in view of Itoh et al. (US Pat. 4,755,554).

Mangold et al. teaches fumed silica doped with potassium by means of aerosol (Example 5). Mangold et al. further teaches that the pyrogenically prepared, potassium doped silicas can be used as fillers for silicone rubbers (3:26-36).

Mangold et al. does not explicitly teach that the doped silicas can be used as fillers for high temperature vulcanizing (HTV) silicone rubbers. However, Itoh et al. teaches high-temperature vulcanizable/heat curable (HTV) silicone rubber compositions which comprise

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pyrogenically prepared silica as fillers (abstract and 4:31-40). Mangold et al. and Itoh et al. are combinable because they are from the same field of endeavor, namely, compositions containing pyrogenically prepared oxide. At the time of invention, a person having ordinary skill in the art would have found it obvious to employ the doped, pyrogenically prepared oxides as taught by Mangold et al. as fillers into the high-temperature vulcanizable/high-temperature curable silicone rubber compositions as taught by Itoh et al. and would have been motivated to do so since Mangold et al. teaches that the addition of doped, pyrogenically prepared silicas can be used as fillers for silicone rubbers to provide heat-stabilization (3:26-36) which would be a desirable property given the high temperature curing conditions employed by Itoh et al. (6:34-44).

### ***Response to Arguments***

Regarding Mangold et al. in view of Azechi et al. (claims 1, 6 and 7), Applicants argue that Mangold teach that their silica has a distinctly acid pH while the instant claimed silica has a more neutral pH, presumably due to its method of preparation. However, there are no claim limitations to pH and as such, this statement is not persuasive.

Applicants further argue that Azechi et al. do not describe the use of potassium doped silica and that Azechi et al. do not teach that the silica is used to lower viscosity or lower Williams plasticity. The Examiner does not disagree; however, Azechi et al. is not relied on for such teachings. Azechi et al. is relied upon as a teaching of liquid silicone rubber compositions. Mangold et al. is relied upon due to the teaching of fumed silicas which are doped with potassium and can be added to silicone rubbers to adjust the rheology of liquid systems, and for heat stabilization purposes. Therefore, the motivation to add the silica fillers (adjustment of the

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rheology of liquid systems and to provide heat stabilization) as taught by Mangold et al. into the liquid silicone rubbers of Itoh et al. is rooted within the teachings of Mangold et al.

Applicant's argument in footnote 1 of the remarks is noted. However, Mangold et al. does not simply teach that the doped fillers may be used as fillers for silicone rubbers, but further teaches that such fillers present in silicone rubbers would adjust the rheology and provide heat stabilization. Therefore, there is both an explicit teaching and motivation to employ the pyrogenically prepared silicas of Mangold et al. into silicone rubbers and as such, Mangold et al. is not simply relied upon as an "obvious to try" teaching.

Applicant's arguments in footnote 3 of the remarks are noted. However, any differences which may be present between the process of preparing the doped silicas of Mangold et al. and the instant disclosure are not claimed and as such, this argument is not persuasive.

Applicant's arguments in footnote 4 of the remarks are noted. However, there are no limitations directed to "low-structure fumed silica". Further, such a limitation would only be significant if the process of preparing the doped silicas is found to be patentably distinct from the teachings of Mangold et al.

Applicant's arguments in footnote 5 of the remarks are noted. The instant specification presents several experiments which show the difference between **doped** fumed silica and **undoped** fumed silica. While the Examiner does not dispute the advantages that the doped fumed silicas possess when compared to undoped fumed silica as shown in the instant specification, the 103(a) rejections relied upon above employ such doped fumed silica.

Regarding Mangold et al. in view of Itoh et al. (claim 4), Applicants argue that Itoh et al. do not teach or suggest potassium doped silica as fillers to lower the viscosity and/or Williams

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plasticity. The Examiner does not disagree. Itoh et al. is relied upon as a teaching of high-temperature vulcanizing silicone rubber compositions. Mangold et al. is relied upon due to the teaching of fumed silicas which are doped with potassium and can be added to silicone rubbers for heat stabilization purposes. Therefore, the motivation to add the silica fillers as taught by Mangold et al. into the high temperature vulcanizing silicone rubbers of Itoh et al. is rooted within the teachings of Mangold et al. Additionally, Mangold et al. does not simply teach that the doped fillers may be used as fillers for silicone rubbers, but further teaches that such fillers present in silicone rubbers would adjust the rheology and provide heat stabilization. Therefore, there is both an explicit teaching and motivation to employ the pyrogenically prepared silicas of Mangold et al. into silicone rubbers and as such, Mangold et al. is not simply relied upon as an "obvious to try" teaching.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Loewe whose telephone number is (571)270-3298. The examiner can normally be reached on Monday through Friday from 5:30 AM to 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./

Examiner, Art Unit 1796

26-Aug-08

/Randy Gulakowski/

Supervisory Patent Examiner, Art Unit 1796